

C1
Cont'd
and/or water-soluble host polymer blended with the PANI-PAAMPSA complex.

C2
4. (Amended) The film of Claim 1, wherein the water dispersible and/or water-soluble host polymer is polyacrylamide (PAM), PAAMPSA, poly(acrylic acid) (PAA), poly(styrenesulfonic acid), poly(vinyl pyrrolidone) (PVPd), acrylamide copolymers, cellulose derivatives, carboxyvinyl polymer, poly(ethylene glycols), poly(ethylene oxide) (PEO), poly(vinyl alcohol) (PVA), poly(vinyl methyl ether), polyamine, polyimines, polyvinylpyridines, polysaccharide, polyurethane dispersion, and combinations thereof.

5. (Amended) A method of forming the film of Claim 1, comprising the steps of:

providing a substrate;

providing an aqueous dispersion/solution comprising the at least one water dispersible and/or water-soluble host polymer blended with the PANI-PAAMPSA complex; and

depositing the aqueous dispersion/solution onto the substrate to form the film.

C3
7. (Amended) The method of Claim 5, wherein the water dispersible and/or water-soluble host polymer is polyacrylamide (PAM), PAAMPSA, poly(acrylic acid) (PAA), poly(styrenesulfonic acid), poly(vinyl pyrrolidone) (PVPd), acrylamide copolymers, cellulose derivatives, carboxyvinyl polymer, poly(ethylene glycols), poly(ethylene oxide) (PEO), poly(vinyl alcohol) (PVA), poly(vinyl methyl ether), polyamine, polyimines, polyvinylpyridines, polysaccharide, polyurethane dispersion, and combinations thereof.

8. (Amended) An electronic device comprising a first and second electrodes, and a PANI-PAAMPSA film between said first

C3
C3A
and second (of) electrodes, said PANI-PAAMPSA film comprising polyaniline in the emeraldine salt form (PANI) with poly(2-acrylamido-2 methyl-1-propanesulfonic acid) (PAAMPSA) as a counterion.

10. (Amended) The electronic device of Claim 8, wherein the film further comprises at least one water dispersible and/or water-soluble host polymer.

C4
11. (Amended) The electronic device of Claim 10, wherein the at least one water dispersible and/or water-soluble host polymer is polyacrylamide (PAM), PAAMPSA, poly(acrylic acid) (PAA), poly(styrenesulfonic acid), poly(vinyl pyrrolidone) (PVPd), acrylamide copolymers, cellulose derivatives, carboxyvinyl polymer, poly(ethylene glycols), poly(ethylene oxide) (PEO), poly(vinyl alcohol) (PVA), poly(vinyl methyl ether), polyamine, polyimines, polyvinylpyridines, polysaccharide, polyurethane dispersion, and combinations thereof.

C5
13. (Amended) A light-emitting diode comprising a first and second electrodes, and a PANI-PAAMPSA film, said PANI-PAAMPSA film comprising polyaniline in the emeraldine salt form (PANI) with poly(2-acrylamido-2 methyl-1-propanesulfonic acid) (PAAMPSA) as a counterion.

15. (Amended) The diode of Claim 13, wherein the film further comprises at least one water dispersible and/or water-soluble host polymer.

C6
16. (Amended) The diode of Claim 15, wherein the at least one water dispersible and/or water-soluble host polymer is polyacrylamide (PAM), PAAMPSA, poly(acrylic acid) (PAA), poly(styrenesulfonic acid), poly(vinyl pyrrolidone) (PVPd),

acrylamide copolymers, cellulose derivatives, carboxyvinyl polymer, poly(ethylene glycols), poly(ethylene oxide) (PEO), poly(vinyl alcohol) (PVA), poly(vinyl methyl ether), polyamine, polyimines, polyvinylpyridines, polysaccharide, polyurethane dispersion, and combinations thereof.

17. (Amended) The diode of Claim 16, wherein the film has an electrical resistivity greater than 10^4 ohm-cm.

18. (Amended) The diode of Claim 16, wherein the film has an electrical resistivity of greater than 10^5 ohm-cm.

19. (Amended) The diode of Claim 13, wherein the film is disposed between a light-emitting polymer and a high work function electrode.

20. (Amended) The diode of Claim 19, wherein:

the high work function electrode comprises polyaniline; poly(3,4-ethylenedioxythiophene); indium tin oxide; an oxide of a metal from Group IIA (Be, Mg, Ca, Sr, Ba, Ra); an oxide of metals from Group IIIA selected from B, Al, Ga, and Tl; or an oxide of metals from Group IVA (C, Si, Ge, Sn, Pb); and

wherein the device further comprises a low work function electrode selected from alkaline earth metals, alloys of alkaline earth metals, and alkaline earth metal oxides.

Please cancel Claims 3 and 6.

Please add the following new Claims 21-23:

21. (New) A PANI-PAAMPSA film comprising polyaniline in the emeraldine salt form (PANI) with poly(2-acrylamido-2 methyl-1-propanesulfonic acid) (PAAMPSA) as a counterion,